



# National Weather Service

## Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
----------	------	----------------------------	---------------------------	--------------------------	--------------------------------	---------------------------------	---------------------------------	------------------------------	--------------------

### LAKE MICHIGAN

<b>LMZ643</b>	<b>Sheboygan To Pt Washington Wi</b>								
Sheboygan	04	0321CST			0	0			<b>Marine Tstm Wind (MG38)</b>
A cluster of storms pushed through Ozaukee County and eastern Sheboygan County. One of the storms had enough energy to produce a strong wind gust on the Lake Michigan shoreline in the city of Sheboygan.									
<b>LMZ645</b>	<b>North Pt Lt To Wind Pt Wi</b>								
Cudahy	21	0951CST			0	0			<b>Marine Tstm Wind (MG38)</b>
<b>LMZ645</b>	<b>North Pt Lt To Wind Pt Wi</b>								
Milwaukee Harbor	21	1010CST			0	0			<b>Marine Tstm Wind (MG37)</b>
A severe thunderstorm pushed northeast from Waukesha County through Milwaukee County and out over the Lake Michigan waters. It produced strong wind gusts between the Milwaukee Harbor and Cudahy.									
<b>LMZ646</b>	<b>Wind Pt Lt Wi To Winthrop Hbr Il</b>								
Kenosha	23	0410CST			0	0			<b>Marine Tstm Wind (MG42)</b>
A diminishing line of storms moved off-shore of Kenosha, and produced a strong wind gust on the Lake Michigan shoreline in Kenosha.									
<b>LMZ645</b>	<b>North Pt Lt To Wind Pt Wi</b>								
Cudahy	25	2307CST			0	0			<b>Marine Tstm Wind (MG35)</b>
<b>LMZ646</b>	<b>Wind Pt Lt Wi To Winthrop Hbr Il</b>								
Racine	26	0004CST			0	0			<b>Marine Tstm Wind (MG38)</b>
A line of storms moved out over the Lake Michigan waters east of the Milwaukee to Kenosha area. Some strong gusts were generated near Cudahy and Racine.									

### WISCONSIN, Southeast

<b>Ozaukee County</b>									
Mequon	04	0630CST			0	0	500K		<b>Lightning</b>
<b>Ozaukee County</b>									
Cedarburg	04	0846CST			0	0			<b>Hail(0.75)</b>
A severe thunderstorm pushed across Ozaukee County during the morning of Independence Day. It produced penny sized hail in Cedarburg. Earlier storms had lightning which struck a condominium complex in Mequon. The resultant fire had 20-foot flames as the building burnt to the ground.									
<b>Dodge County</b>									
5 N Horicon	07	1225CST 1345CST			0	0			<b>Funnel Cloud</b>
<b>Dodge County</b>									
3 ESE Waupun	07	1240CST			0	0			<b>Funnel Cloud</b>
<b>Dodge County</b>									
5 W Brownsville	07	1306CST			0	0			<b>Funnel Cloud</b>
<b>Dodge County</b>									
Knowles	07	1306CST			0	0			<b>Funnel Cloud</b>
<b>Fond Du Lac County</b>									
Byron	07	1309CST			0	0			<b>Funnel Cloud</b>
A lake breeze boundary developed and began to push inland during the late morning hours on July 7th. As the boundary headed inland, it encountered some instability and set off scattered showers and a few thunderstorms during the early afternoon across Dodge and Fond du Lac counties. Due to favorable conditions, several funnel clouds developed within these showers. The funnel clouds were seen by many severe weather spotters.									



# National Weather Service

## Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
----------	------	----------------------------	---------------------------	--------------------------	--------------------------------	---------------------------------	---------------------------------	------------------------------	--------------------

### WISCONSIN, Southeast

**WIZ046>047-051>052-056>060-062>072**      **Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha**

19	0800CST	0	0	Drought
31	2359CST			

While the U.S. Drought Monitor began categorizing portions of southeast Wisconsin as being in a severe drought (D2) on July 12, the severe drought area expanded to affect all of south central and southeast Wisconsin on July 19. Portions of southeast Wisconsin were upgraded to extreme drought (D3) on July 19. A prolonged period of abnormally dry weather began in March and continued through July, causing rainfall deficits to accumulate quickly. Milwaukee General Mitchell International Airport reported a 6.99 inch deficit from the beginning of March through the end of July. Madison's Truax Field reported a 4.08 inch deficit. Very warm and clear conditions for most of the first half of the summer exacerbated the drought conditions. Widespread crop losses were common, causing \$\$ million dollars in damage.

A severe drought means crop or pasture losses are likely, fire risk is very high, and water shortages are common. An extreme drought means major crop or pasture losses are likely, fire risk is extremely high, and widespread water shortages are common.

<b>Green County</b> New Glarus to 1 S Monticello	21	0730CST			0	0	20K	Thunderstorm Wind (EG56)
<b>Jefferson County</b> 1 SW Watertown	21	0918CST			0	0	1K	Thunderstorm Wind (MG53)
<b>Waukesha County</b> New Berlin	21	0940CST			0	0	5K	Thunderstorm Wind (MG59)
<b>Waukesha County</b> 4 S Waukesha to Brookfield	21	0943CST 0955CST			0	0	10K	Thunderstorm Wind (EG61)
Thunderstorm wind gusts of hurricane force caused scattered areas of large tree damage from the Waukesha area northeast to Brookfield.								
<b>Dodge County</b> 8 S Beaver Dam	21	0945CST 1045CST			0	0		Funnel Cloud
<b>Ozaukee County</b> Saukville	21	1028CST			0	0		Thunderstorm Wind (EG56)
<b>Ozaukee County</b> Grafton	21	1138CST			0	0	20K	Lightning
Lightning struck a house, setting it on fire.								

Scattered severe thunderstorms developed during the mid to late morning hours on July 21st, across mainly southeast Wisconsin, in response to a disturbance riding along a quasi-stationary front. These storms produced primarily damaging winds that uprooted trees, and/or damaged power lines. The earliest cluster of severe storms affected northern Green County. A home in New Glarus was damaged after the powerful winds pushed a tree on its roof. One storm developed along Interstate-43 in Rock County and headed northeast through the central part of Waukesha County with winds of 56 to 61 knots (65 to 70 mph). From there it passed through Ozaukee County and out over Lake Michigan. Scattered areas of tree damage resulted from this storm, especially in the Waukesha and Brookfield areas of Waukesha County. Lightning also struck a home in Grafton (Ozaukee Co.) and set it on fire with this storm. Another storm produced a funnel cloud south of Beaver Dam (Dodge Co.).

Sauk County Merrimac	23	1223CST	0	0	Hail(0.75)
-------------------------	----	---------	---	---	------------



# National Weather Service

## Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
<b><u>WISCONSIN, Southeast</u></b>									
<b>Marquette County</b>									
5 E Westfield	23	1326CST			0	0	1K		Thunderstorm Wind (EG52)
<b>Marquette County</b>									
7 S Montello	23	1330CST			0	0	3K		Thunderstorm Wind (EG56)
<b>Green Lake County</b>									
Countywide	23	1335CST 1350CST			0	0	50K		Thunderstorm Wind (EG56)
Widespread tree damage and power-line damage reported across the county.									
<b>Sauk County</b>									
10 ENE Baraboo	23	1335CST			0	0			Thunderstorm Wind (EG52)
<b>Columbia County</b>									
4 N Portage to Pardeeville	23	1340CST 1350CST			0	0	10K		Thunderstorm Wind (EG56)
<b>Fond Du Lac County</b>									
Brandon	23	1355CST			0	0	5K		Thunderstorm Wind (EG56)
<b>Dodge County</b>									
Fox Lake	23	1403CST			0	0	5K		Thunderstorm Wind (EG65)
Roof damage to a house.									
<b>Dodge County</b>									
Beaver Dam	23	1405CST			0	0	2K		Thunderstorm Wind (EG52)
<b>Dodge County</b>									
3 SW Waupun	23	1405CST			0	0	50K		Thunderstorm Wind (EG65)
Barn blown down.									
<b>Dodge County</b>									
4 NW Atwater	23	1410CST			0	0	1K		Thunderstorm Wind (EG52)
<b>Fond Du Lac County</b>									
2 S Rosendale	23	1411CST			0	0	1K		Thunderstorm Wind (EG52)
<b>Dane County</b>									
Middleton	23	1420CST			0	0	2K		Thunderstorm Wind (EG52)
<b>Dodge County</b>									
3 E Richwood	23	1425CST			0	0	1K		Thunderstorm Wind (EG52)
<b>Columbia County</b>									
Fall River	23	1430CST			0	0	2K		Thunderstorm Wind (EG52)
<b>Jefferson County</b>									
5 W Ft Atkinson to 3.8 SE Sullivan	23	1430CST 1445CST			0	0	30K		Thunderstorm Wind (MG58)
<b>Jefferson County</b>									
Watertown	23	1435CST			0	0	1K		Lightning
<b>Columbia County</b>									
Columbus	23	1440CST			0	0	20K		Thunderstorm Wind (EG56)
<b>Rock County</b>									
3 NW Milton	23	1447CST			0	0	1K		Thunderstorm Wind (EG56)
<b>Waukesha County</b>									
Hartland	23	1450CST			0	0	1K		Thunderstorm Wind (EG52)
<b>Rock County</b>									
Milton	23	1452CST			0	0	1K		Thunderstorm Wind (EG56)
<b>Waukesha County</b>									
5 SSE Dousman	23	1455CST			0	0	1K		Thunderstorm Wind (EG52)



# National Weather Service

## Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
----------	------	----------------------------	---------------------------	--------------------------	--------------------------------	---------------------------------	---------------------------------	------------------------------	--------------------

### WISCONSIN, Southeast

Waukesha County									
Mukwonago	23	1500CST			0	0	1K		Thunderstorm Wind (EG52)
Walworth County									
East Troy	23	1502CST			0	0	5K		Thunderstorm Wind (EG56)
Walworth County									
La Grange	23	1502CST			0	0	3K		Thunderstorm Wind (EG52)
Walworth County									
Spring Prairie	23	1502CST			0	0	3K		Thunderstorm Wind (EG56)
Walworth County									
Whitewater	23	1506CST			0	0	1K		Thunderstorm Wind (MG52)
Walworth County									
East Troy	23	1507CST			0	0			Hail(0.75)
Walworth County									
East Troy	23	1521CST			0	0			Thunderstorm Wind (EG56)
Kenosha County									
2 NE New Munster	23	1524CST			0	0	1K		Thunderstorm Wind (EG52)
Kenosha County									
Silver Lake	23	1524CST			0	0	1K		Thunderstorm Wind (EG52)
Racine County									
1 NW Burlington	23	1524CST			0	0	1K		Thunderstorm Wind (EG52)
Kenosha County									
2 W Silver Lake	23	1526CST			0	0	1K		Thunderstorm Wind (EG52)
Racine County									
Burlington	23	1529CST			0	0	3K		Thunderstorm Wind (EG56)
Kenosha County									
Silver Lake	23	1532CST			0	0	1K		Thunderstorm Wind (EG52)
Jefferson County									
Watertown	23	2130CST			0	0	100K		Lightning

A mesoscale convective system/derecho developed in western Minnesota during the early morning, then tracked into central Wisconsin before riding the warm front southeast into southeast Wisconsin and portions of south-central Wisconsin during the afternoon. The powerful winds generated by the storms were generally in the 52 to 56 knot range (60 to 65 mph), but peaked at hurricane-force in a couple locations. Most of the damage was characterized as toppled large trees and downed power lines as the storms raced southeast. The hardest hit areas were in Marquette, Dodge, and Jefferson counties. Widespread tree damage was reported by law enforcement in Green Lake and southern Jefferson counties. Otherwise damaging thunderstorm winds were more scattered. A barn was completely destroyed 3 miles southwest of Waupun at 1405CST where winds were estimated to have gusted around 65 knots (75 mph). Roof damage was noted on a house in Fox Lake (Dodge Co.), where winds were estimated to have gusted to around 65 knots (75 mph). As the northeastern end of the line progressed toward the Lake Michigan shoreline, it weakened substantially. However, the southwestern portion of the line progressed into Walworth, Racine, and Kenosha counties, continuing to produce areas of wind damage, before it died at the Illinois border shortly after 1530CST. Lightning during the afternoon and overnight hours damaged two buildings in Watertown (Jefferson Co.). Synoptically, the quasi-stationary front, noted in the July 21st episode, sagged south into Iowa and Illinois on the 22nd, then began to head back into Wisconsin as a warm front on the 23rd.

WIZ064>066-069>072      Jefferson - Waukesha - Milwaukee - Rock - Walworth - Racine - Kenosha  
24      1400CST      0      0      Excessive Heat



# National Weather Service

## Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

### WISCONSIN, Southeast

#### 2000CST

A mid-summer heat wave developed across the Midwest and Great Lakes as an upper-level ridge amplified. West to southwest winds pumped in very hot and humid air, making for the hottest temperatures observed in several years. High temperatures ranged from the middle 90s to around 100 across parts of south-central and southeast Wisconsin. Some maximum temperatures were 97 at Janesville (Rock Co.), 101 at the waste water treatment plant in Kenosha, 100 near Genoa City (Walworth Co.), 99 at both Racine and Kenosha, and 97 at Milwaukee General Mitchell Int'l Airport. These temperatures, coupled with dew points in the lower or middle 70s, created dangerous heat index readings of between 110 to 113 degrees during the mid-afternoon and evening hours. The highest heat index values noted were 113 at Watertown (Jefferson Co.), 112 at Janesville (Rock Co.), and 110 at Waukesha (Waukesha Co.), Burlington (Racine Co.), and Kenosha (Kenosha Co.). There were no reports of heat-related fatalities or injuries. Over the remainder of south-central and southeast Wisconsin maximum afternoon temperatures peaked in the lower to mid 90s with heat index values topping out at 102 to 109, which is below excessive heat criteria.

<b>Green County</b> 3 SE Monroe	25	1220CST			0	0	5K		Thunderstorm Wind (EG56)
<b>Rock County</b> Orfordville	25	1250CST			0	0	8K		Lightning
Lightning caused a storage shed to start on fire.									
<b>Rock County</b> Orfordville	25	1325CST			0	0	1K		Lightning
<b>Walworth County</b> 3 N Tibbet to 2.8 NE Tibbet	25	1420CST 1425CST			0	0	250K		Thunderstorm Wind (EG65)
Downburst winds toppled numerous large trees in the area north and northeast of Tibbet around the Lauderdale Lakes. Twenty-five homes sustained tree damage, and some power lines were pulled down.									
<b>Rock County</b> 1 NE Milton to 7 NE Milton	25	1500CST 1512CST			0	0	2.6M		Hail(1.75)
Corn and soybean crops were severely damaged or destroyed by wind -driven large hail up to 1.75 inches in diameter in the area from 1 mile northeast of Milton to about 7 miles northeast of Milton. The damage swath was about 2 miles wide.									
<b>Rock County</b> 4 NNE Milton to 5 NE Milton	25	1507CST 1511CST	2	50	0	0	300K		Tornado (F1)
A tornado spun up at 1507CST about 4 miles north-northeast of Milton (Rock Co.). about 1/4 mile north of the intersection of Vickerman Rd. and Godfrey Rd. It traveled east-southeast for 2 miles and dissipated just northwest of the intersection of McCord Rd. and Salisbury Drive. On Godfrey Rd it destroyed one large barn, severely damaged another barn, destroyed a shed, and inflicted minor damage to a home. Otherwise many large trees were uprooted or shredded, and a couple power lines were ripped.									
<b>Rock County</b> 3 W Milton to 5 NE Milton	25	1510CST 1525CST			0	0	200K		Thunderstorm Wind (EG65)
<b>Rock County</b> 4 N Milton to 8 NE Milton	25	1510CST 1530CST			0	0	100K		Thunderstorm Wind (EG65)
<b>Rock County</b> 7 N Milton	25	1520CST			0	0			Hail(1.00)



# National Weather Service

## Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<b><u>WISCONSIN, Southeast</u></b>									
<b>Walworth County</b>									
Whitewater	25	1525CST			0	0	3K		Thunderstorm Wind (EG56)
<b>Walworth County</b>									
2.2 NE Tibbet	25	1545CST			0	0	1K		Thunderstorm Wind (EG52)
<b>Columbia County</b>									
3 NE Leeds	25	1618CST			0	0			Funnel Cloud
<b>Columbia County</b>									
4 SW Columbus	25	1626CST			0	0			Funnel Cloud
<b>Dodge County</b>									
1 N Reeseville	25	1652CST			0	0			Funnel Cloud
<b>Sauk County</b>									
Baraboo	25	2110CST			0	0	20K		Thunderstorm Wind (EG65)
A tree fell onto a house and a vehicle was damaged. Trees were also damaged at the Circus World Museum.									
<b>Marquette County</b>									
Harrisville	25	2118CST			0	0	2K		Thunderstorm Wind (EG56)
<b>Columbia County</b>									
7 SW Portage	25	2120CST			0	0	5K		Thunderstorm Wind (EG56)
<b>Washington County</b>									
Slinger	25	2124CST			0	0	2K		Thunderstorm Wind (EG52)
<b>Green Lake County</b>									
Kingston	25	2140CST			0	0			Hail(1.00)
<b>Columbia County</b>									
7 E Arlington	25	2220CST			0	0			Hail(0.75)
<b>Dane County</b>									
1 SSW Shorewood Hills	25	2230CST			0	0	5K		Thunderstorm Wind (MG58)
<b>Washington County</b>									
Hartford to 2.7 N Hartford	25	2238CST			0	0	25K	2K	Thunderstorm Wind (EG65)
A 20 by 20 foot section of a barn door was blown off as well as a roof of a storage garage. A 100 by 30 foot corn patch was flattened.									
<b>Jefferson County</b>									
Cambridge	25	2258CST			0	0	2K		Thunderstorm Wind (EG52)
<b>Waukesha County</b>									
2 WNW North Prairie	25	2340CST			0	0	5K		Thunderstorm Wind (EG56)
Two rounds of severe weather occurred on July 25th. The first round developed during the afternoon hours as instability increased and scattered severe storms developed and tracked across Iowa, northern Illinois and extreme southern Wisconsin. One pulsing storm produced damaging downburst winds which toppled large trees on a golf course southeast of Monroe. One strong supercell storm crossed into Wisconsin and propagated into Rock County where it nearly stalled and began backbuilding. Rotating wall cloud were reported across Rock County by law enforcement. Golf ball sized hail (1.75") was reported from 1 NE Milton to 7 NE Milton at 1500CST, resulting in extensive crop damage. Downburst winds were reported west, north, and northeast of Milton. At 1507CST a rain-wrapped tornado developed 4 NNE Milton and traveled east to 5 NE Milton where it dissipated at 1511CST. Some structural damage resulted, and winds were estimated around 85 knots (100 mph), giving this tornado a F1 ranking. Other thunderstorms developed across Columbia and Dodge counties, producing mainly funnel clouds.									
The second round of severe weather came with the cold front after 2100CST. A line of severe thunderstorms, with some bowing segments, developed and pushed through south central and southeast Wisconsin during the late evening. Damaging winds, which toppled large trees, with some large hail, were noted with this line. A thunderstorm with estimated wind gusts of 65 knots (75 mph) caused a tree to be uprooted and land on a house in Baraboo at 2110 CST, causing 20,000 dollars in damage. Near Hartford, a 20 by 20 foot section of a barn door was blown off as well as a roof of a storage garage. A 100 by 30 foot corn patch was also flattened. Elsewhere, scattered reports of tree damage were reported.									